

27 AVSPKTYKDADFYVAPTQQDVNY__DLVDDFGANGNDTSD 64
 | | | | | | | | | | | | | | | |
 28 DTSEISEVPTELRAAASSFYTPPCQNVRRANKKNLVIDYGVNHNDQND 74
 ↓ ↓
 65 DSNALQRAINAI SRKPNGGILLIPNGTYHFLGIQKSNVHIRVESDVIK 114
 | | | | | | | | | | | | | | | |
 75 DSSKLNLAIKDLS__DTGGILITLPKGKYLYLTKIRMRSNVHLEIEKGTIVTY 122
 ↓
 115 PIWN GDGKNHRLFEVG__VNNIVRNFSFQGLGNGFLVDFKDSRDKNLAV 161
 | | | | | | | | | | | | | | | |
 123 PTKGLTPAKNHRIFDFASKTEEKIENASTIVGKGGKFTVDLRGNSSKNQIV 172
 ↓ ↓
 162 FKLGDVRNYKISNFTTIDNKTIFASILVDVTERNGRLHWSRNGIIERIKQ 211
 | | | | | | | | | | | | | | | |
 173 ADVGNVINFKISNFTTKDEKTIFASILVSFTDKAGN_AWPHKGIIENIDQ 221
 ↓ ↓ ↓
 212 NNALFGYGLIQTYGADNILFRNLHSECGIALRMEITDNLIMKNYKQGGIRN 261
 | | | | | | | | | | | | | | | |
 222 ANAHITGYGLIQAYAADNILENNLSCTGGVTLRLETIDNLAMKTAKKGGVRD 271
 ↓
 262 IFADNIRCSKGLAAMFPGPHFMKNGDVQVINVSSVSCGSAVRSDSGFVEL 311
 | | | | | | | | | | | | | | | |
 272 IFATKIKNINGLTVMFSPHFMENGKVTIDDVTAIGCAYAVRVEHGFIEI 321
 ↓
 312 FSPTIDEVHTROSWKQAVESKLGRGCAQTPYARGNGGTRWAARVT__OKD 358
 | | | | | | | | | | | | | | | |
 322 FDKGNRASA_DAFKNYIEGILGAGSVEVVYKRNGRT_WAARIANDFNEA 369
 ↓
 359 ACLDKAKLEYGIEPGSFGIVKVFDVIARF_GYNADLKQDQLDYFSTSNEF 407
 | | | | | | | | | | | | | | | |
 370 AYNHSNPAVSGIKPGKFATSKVINVKATYKGTGAKLKQAFLSYLPCSER_ 418
 ↓
 408 CKRVCLPTKEQWSKQGQIYIGPSLAVID_TTPETSKYDYDVKTIFNVKRI 457
 | | | | | | | | | | | | | | | |
 419 SK_VCRPGPDGFE____YNGPSLGVTIDNTKRDNLSLGNYNVNVSTSSVQ 462
 ↓
 457 NFPVNSHKTIDINTESSRVCNYY_GMSECSSSRWER 491
 | | | | | | | | | | | | | | | |
 463 GFPNNYVLNVKYNT__PKVCNQNLG_STTSCN 491

FIG.1

Cytophaga drobachiensis iota-carrageenase

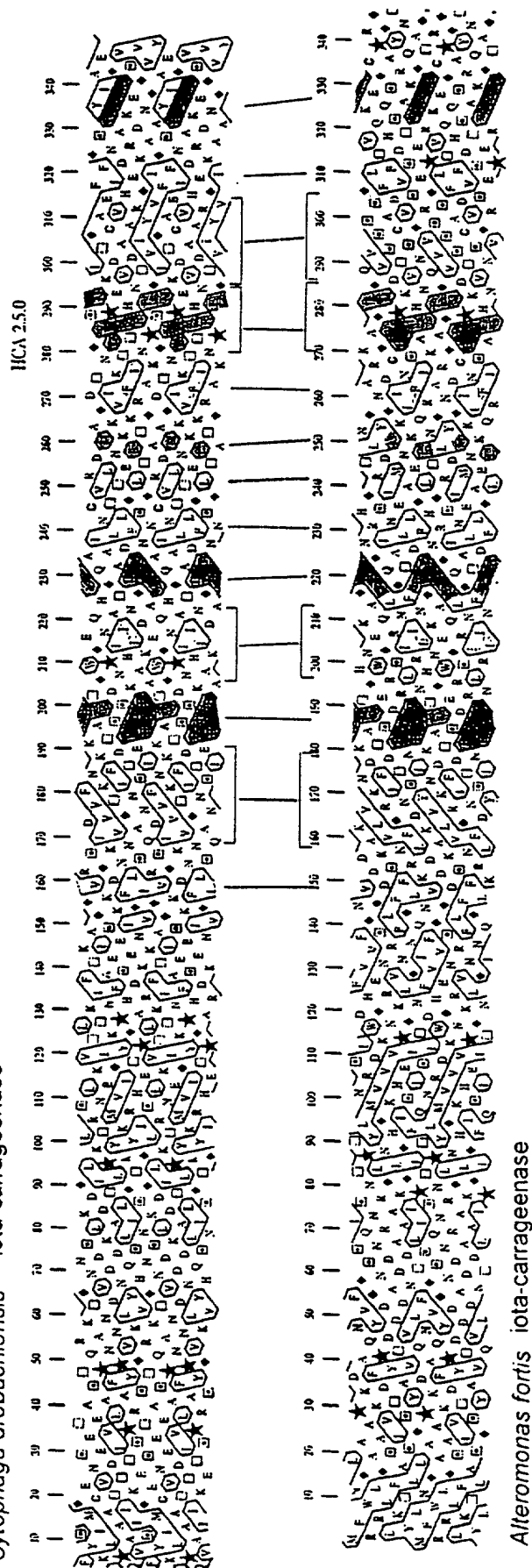
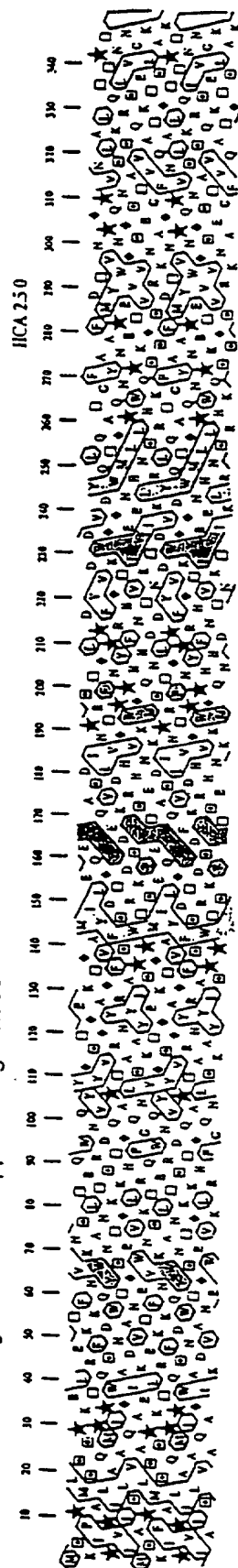


FIG.2

1	MKKPNFYGKMGR TALSSLFYLFGLVYGQOPTKTSNPNDQWTIKWSASDEFN_KNDPDW	59
1	MKPISIVAFFIPAISMLLLSAVSQAASM_QPPIAK_PGETWILQAKRSDEFNVK_DAT_	55
60	AKWIK_TGNLPNTSAWKWN_NQKNVKISNGIAELTM_RHNANNTPPDGGT_____YF_	108
56	_KWNFQTENYGVWS_WK_NENAT_V__SNGKLKLTTKRESHQRTFWDGCNQQQVANYPLY	109
109	_TSGIFKSYQKFTYGYFEAKIQGADIGEGVCPSPFWLYSDFDYSVAN_GETVYSEIDVVEL	166
110	YTSGVAKSRATGNYGYEARIKGASTFPGVSPAFWMYSTIDRSLTKEGDVQYSEIDVVEL	169
167	QQFDWY_EGHODDIYDMDLNLHAVVKENGQGVWKRPKMYPQEQLNKWRAM_DPSKDFHIY	224
170	TQKSAVRES__DH__DLH_NI__VVK_NGKPTWMRPGSFPQTNHNGYHLPFDPRNDFHTY	221
225	GCEVNQNEIIWYVDGVE_VARKPNKYWHRPMNVTLSSLGLRKFVKFFDNKNNAINPETDA	283
222	GVNVTKDKITWYVDG_EIVGEKDNLYWHRQMNLTLSQLRAPHTQW____KCNQFYPSAN_	276
284	K_AREKLSDIPTSMYVDYVRVWEKSAGNTTNPTSEVGTCLKTKGSKLVIDHWDASTGTIS	342
277	KSA_EGF__PTSMEVDYVRTWVKVGNNNSAPGEGQSCPNTFVAVNSVQLSAAKQTLRKG	332
343	AVSNNTKTGQYAGSVNNASIAQIVTLKANTS YKVS AFGKASSPGTSAYLGISKASNNELI	402
333	QSTTLESTVLPNCATNKKVIYSSSNKNVATVNSAGVV_KAKNKG TATITVKTKNKGKIDKL	392
403	SNFEFKTTSYSKGEIEIR TGNVQESYRIWYWSSGQAYCDDFNLVEINSGASQLNENETET	462
393	TIAVN	397
463	ALEKGIHIYPNPYKNGPLTIDFGKPFSGEVQITGLNGRTFLRRNVVDQTSVQLLESKSKF	522
523	KSGLYIVKISGPDGEVSKKILVE	545

FIG.3

Alteromonas carrageenovora kappa-carrageenase



Cytophaga drobachiensis kappa-carrageenase

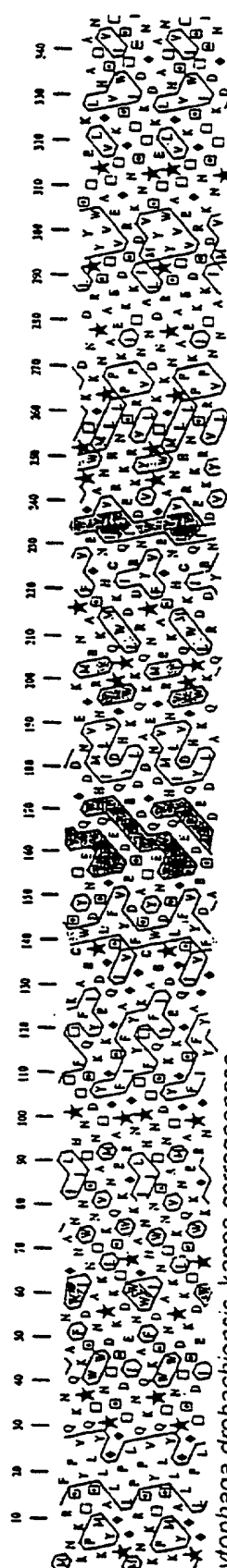


FIG.4